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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,644	10/06/2003	Reinhard Pantke	028987.52517US	7822

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EXAMINER

BARRETT, SUZANNE LALE DINO

ART UNIT PAPER NUMBER

3676

DATE MAILED: 07/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/678,644

Applicant(s)

PANTKE ET AL.

Examiner

Suzanne Dino Barrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claim 29 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 5/10/05.
2. Applicant's election with traverse of Group I – claims 1-28 in the reply filed on 5/10/05 is acknowledged. The traversal is on the ground(s) that the subject matter is such that it should be examined and allowed in a single application. This is not found persuasive because the method limitations of forming a torque transmitting device of Group II - claim 29 are distinct from the flexible shaft torque transmitting door lock element of claims 1-28.

The requirement is still deemed proper and is therefore made FINAL.

### ***Claim Rejections - 35 USC § 112***

3. Claims 19, 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, line 1, "the depression" lacks antecedent basis since claims 12 and 4 do not recite a depression (it is only set forth in claim 6). In dependent claims 24-28, the preamble sets forth a "door lock", while independent claim 23 recites a "torque

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transmitting device" creating confusion as to whether the combination of torque transmitting device and door lock is being claimed. As interpreted by the examiner, claim 23 sets forth the subcombination "torque transmitting device", not the combination including the door lock.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 22 is rejected under 35 U.S.C. 102(b) as being anticipated by Miller et al 5,356,340. Miller et al teaches a one-piece molded flexible plastic drive shaft 34 comprising two driver ends 35,37/36,38 integrally molded thereon. Miller et al further teach that the flexible drive shaft may be used in various mechanical applications (col. 1, lines 19-20) and therefore would be capable of being utilized in a door lock arrangement

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6, 18, 19, 23, 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Tanaka 3,405,539. Miller et al teaches a one-piece molded flexible plastic drive shaft 34 comprising two driver ends 35, 37/36, 38 integrally molded thereon. With respect to claim 5, Miller et al teach the suitability of various elasticities for different applications, such that an inelastic application would have been obvious to one of ordinary skill in the art as a matter of design choice. Miller et al further teach that the flexible drive shaft may be used in various mechanical applications (col. 1, lines 19-20), but fail to specify its use in a door lock arrangement. Tanaka teaches a one-piece molded flexible drive shaft for use in cylinder lock and latch arrangements (col. 2, lines 25-26) comprising a shaft of unitary plastic molded construction and having a cross-sectional shape that is four-cornered, round, hexagonal or any other desired shape (col. 2, lines 28-35). Tanaka further provides depressions or weakenings in the shaft in the form of grooves 22, 24 formed in two different planes along the axial and circumferential directions. It would have been obvious to one of ordinary skill in the art to provide the drive shaft of Miller et al in a door lock arrangement as taught by Tanaka and further, with respect to claims 2, 3, by providing a four-cornered or circular shape as taught by Tanaka to be an obvious matter of design choice.

8. Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Nelsen et al '045. Miller et al teach the drive shaft discussed above but fail to provide cross-sectional weakenings along the shaft in the form of depressions or grooves and in a helical line. Nelsen et al teach a flexible plastic drive shaft 36 comprising helical or radial grooves 46A-46C (see col. 5, lines 3-5) to increase

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flexibility of the shaft. It would have been obvious to modify the shaft of Miller et al by providing grooves of different formation as taught by Nelsen et al to increase the flexibility of the shaft as desired.

9. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Nelsen et al '045 as applied to claim 24 above, and further in view of Seagraves 3,332,255 or Symann 3,874,195. Both Seagraves and Symann teach plastic drive shafts comprising a breakthrough (between 21 and 22 in Fig. 2 of Seagraves; see Fig. 3 of Symann) along the shaft. It would have been obvious to modify the shaft of Miller et al to have such a breakthrough as taught by either Seagraves or Symann to enhance the flexibility of the shaft.

10. Claims 7-15,20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Tanaka '539 as applied to claim 1 above, and further in view of Nelsen et al '045. Miller et al teach the drive shaft discussed above but fail to provide cross-sectional weakenings along the shaft in the form of depressions or grooves and in a helical line. Tanaka teaches the use of such a shaft in a cylinder lock and latch arrangement and further provides depressions in the shaft along the axial and circumferential directions. Nelsen et al teach a flexible plastic drive shaft 36 comprising helical or radial grooves 46A-46C (see col. 5, lines 3-5) to increase flexibility of the shaft. It would have been obvious to modify the shaft of Miller et al, by utilizing it in a lock arrangement as taught by Tanaka, and further, by providing grooves of different formation, as taught by Tanaka with respect to claims 20,21 and as taught by Nelsen et al to increase the flexibility of the shaft as desired.

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11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Tanaka '539 as applied to claim 1 above, and further in view of Seagraves '255 or Symann '195. Both Seagraves and Symann teach plastic drive shafts comprising a breakthrough (between 21 and 22 in Fig. 2 of Seagraves; see Fig. 3 of Symann) along the shaft. It would have been obvious to modify the shaft of Miller et al to have such a breakthrough as taught by either Seagraves or Symann to enhance the flexibility of the shaft.

12. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al in view of Tanaka and Seagraves or Symann as applied to claim 16 above, and further in view of Bailey 5,531,599. Miller et al fails to teach a shaft having hollow sections. Bailey teaches the advantage of providing a flexible drive shaft 115 with hollow sections (col. 8, lines 9-10). It would have been obvious to modify the shaft of Miller, as taught by Tanaka and Seagraves or Symann and further, by providing a hollow section as taught by Bailey to provide enhanced flexibility.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note, especially, the patents to Brahler, Bailey, Link, Cady and Wexler.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne Dino Barrett whose telephone number is 571-272-7053. The examiner can normally be reached on M-Th 8:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Suzanne Dino Barrett  
Primary Examiner  
Art Unit 3676

sdb